

REMARKS/ARGUMENTS

Re-examination and favorable reconsideration in light of the above amendments and the following comments are respectfully requested.

Claims 17 - 37 are pending in the application. Claims 17 - 27, 36, and 37 stand rejected; and claims 28 - 35 stand withdrawn from consideration.

By the present amendment, claims 17 and 36 have been amended; and claim 20 has been cancelled in view of the incorporation of its subject matter into claim 17.

In the office action mailed April 12, 2010, claims 17, 20, 23, 25, 36, and 37 were rejected under 35 U.S.C. 102(b) as being anticipated by JP 2000-135288 to Maruyama et al.; claim 22 was rejected under 35 U.S.C. 103(a) as being unpatentable over Maruyama et al.; claims 21 and 26 were rejected under 35 U.S.C. 103(a) as being unpatentable over Maruyama et al. in view of the Abadie et al. article; and claims 17 - 22, 24 and 26 - 27 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,588,295 to Brotz in view of the article Abadie et al.

The foregoing rejections are traversed by the instant response.

As amended herein, claim 17 is directed to an orientable longitudinal structure comprising: an assembly of substantially longitudinal actuators made of shaped memory alloy; n-doped and p-doped Peltier elements, and electric control means; said actuators being arranged in pairs and positioned in parallel in an antagonist way opposite to each other with respect to their respective memorized shape; each said actuator being in contact substantially at its ends with an n-doped Peltier element

and a p-doped Peltier element, respectively; each said n-doped Peltier element being in contact with a first at least partially annular conducting element and each said p-doped Peltier element being in contact with a second at least partial annular conducting element; the assembly being mounted in series with the electric control means to form a thermoelectric circuit so that, for a fixed direction of an applied current, one of the actuators of each said pair will heat and will undergo a flexion towards its memorized shape, and the actuator positioned in the antagonist way will cool and undergo a flexion opposite its memorized shape, flexing movement of the structure being transmitted between said actuators and said conducting elements. Support for the amendments to claim 17 can be found in original claim 20, paragraph 0061 of the specification, and Fig. 4 of the drawings.

It is submitted that claim 17 as amended is not anticipated by the Maruyama et al. reference. Maruyama et al is directed to providing a cylindrical moving element which can be bent or rotated in a required direction and whose response speed is high. Maruyama et al. lacks any disclosure of each of the n-doped Peltier elements being in contact with a first at least partially annular conducting element and each of the p-doped Peltier elements being in contact with a second at least partially annular conducting element. With regard to the Examiner's comments about claim 20, paragraph 0015 of the Maruyama translation does not disclose the use of any at least partial annular conductors. Still further, Maruyama et al. lacks any disclosure of flexing movement of the structure being transmitted between said actuators and said conducting

elements.

Claims 21, 22, 23, 25, 26, 36, and 37 are allowable for the same reasons as claim 17 as well as on their own accord. The Abadie et al. article does not cure the deficiencies of Maruyama.

With regard to the obviousness rejection based on Brotz and Abadie et al., neither reference teaches or suggests "each of the n-doped Peltier elements being in contact with a first at least partially annular conducting element and each of the p-doped Peltier elements being in contact with a second at least partially annular conducting element." Since neither reference discloses these limitations, the two of the references when combined do not render obvious the subject matter of amended claim 17.

Claims 18 - 22, 24, 26 - 27 are allowable for the same reasons as claim 17 as well as on their own accord.

For the foregoing reasons, the instant application is believed to be in condition for allowance. Such allowance is respectfully solicited.

Should the Examiner believe an additional amendment is needed to place the case in condition for allowance, he is hereby invited to contact Applicants' attorney at the telephone number listed below.

The instant amendment after final rejection should be entered since it does not raise any issue which requires further consideration and/or search on the part of the Examiner and since it does not raise any issue of new matter.

No fee is believed to be due as a result of this response. If the Director determines that an additional

fee is due, he is hereby authorized to charge said fee to  
said Deposit Account No. 02-0184.

Respectfully submitted,  
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